

CLAIMS

1. A safety device for attachment to an electrical plug to prevent
accidental contact with the blades that extend from the front face of
5 the plug during insertion and removal of the plug from a wall socket,
the safety device comprising:
a housing having a rear wall and side walls extending outwardly from
the rear wall;
at least one blade-receiving aperture and at least one channel formed
10 in the rear wall;
a collapsible, dielectric shield member having a first end and a second
end, the first end being receivable within the channel, wherein the shield
member extends outwardly from the rear wall to surround the blades when
the safety device is attached to the plug; and wherein the shield member
15 collapses toward the rear wall when the plug is inserted into the wall socket
and expands to surround the blades when the plug is removed from the wall
socket; and
a connector to secure the housing to the electrical plug.

2. The safety device as defined in claim 1, wherein the side walls extend normally from the rear wall and the channel is formed in the rear wall proximate the side walls.
- 5 3. The safety device as defined in claim 2, wherein the rear wall has an inner surface and an outer surface, and the rear wall is formed with a cavity in the outer surface and a corresponding raised area in its inner surface.
- 10 4. The safety device as defined in claim 3, wherein the channel is formed around the perimeter of the raised area of the inner surface of the rear wall.
- 15 5. The safety device as defined in claim 3, wherein the cavity is sized to fit a complementary-shaped front face of a two-bladed electrical plug..
- 20 6. The safety device as defined in claim 1, wherein the connector comprises at least one adhesive pad, the pad having an inner surface and an outer surface, the inner surface abutting the rear wall of the housing and the outer surface being adapted to abut the front face of the electrical plug.

7. The safety device as defined in claim 6, wherein the adhesive pad is formed with at least one hole therein alignable with the aperture in the rear wall of the housing.

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8. The safety device as defined in claim 7, wherein the hole in the adhesive pad is substantially identical in size and shape to the aperture in the rear wall of the housing.

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9. The safety device as defined in claim 3, wherein the cavity is sized to fit a complementary-shaped front face of a grounded electrical plug.

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10. The safety device as defined in claim 9, wherein a pin-receiving aperture is formed in the rear wall of the housing and is spaced apart from the blade-receiving aperture, whereby the blade-receiving aperture and the pin-receiving aperture are adapted to receive the blades and grounding pin respectively of a grounded electrical plug therein.

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11. The safety device as defined in claim 10, wherein the connector is an adhesive pad and the adhesive pad is formed with a pair of holes and

a third hole that are alignable with the blade-receiving aperture and the pin-receiving aperture of the rear wall.

- 5 12. The safety device as defined in claim 11, wherein the adhesive pad has an inner and an outer surface, and both the inner and outer surfaces have an adhesive applied thereto.

- 10 13. The safety device as defined in claim 1, wherein the aperture is a slit having an upper end, a lower end and opposing sides, and in which the connector comprises a flange disposed on each side of the slit and extending at least partially into the slit, whereby the opposing flanges frictionally grip a plug blade inserted into the slit when the safety device is attached to the plug.

- 15 14. The safety device as defined in claim 13, wherein the flanges extend sufficiently into the slit to grip the blade with a force sufficient to prevent withdrawal of the blade from the slit when the plug is removed from a wall socket.

15. The safety device as defined in claim 14, wherein a pin-receiving aperture is formed in the rear wall and is adapted to receive the grounding pin of a grounded electrical socket therein.

5 16. The safety device as defined in claim 15, wherein the connector comprises a pair of opposing flanges that extend into the pin-receiving aperture and are adapted to frictionally grip a grounding pin of a grounded electrical plug.

10 17. The safety device as defined in claim 1, wherein the shield member is of a sufficient length so that when expanded is disposed inwardly of the tips of the blades when the safety device is connected to the plug.

15 18. A method of attaching a safety device to an electrical plug having at least two electrical contact blades extending outwardly therefrom, the method comprising the steps of:

a) providing a safety device having a housing with at least one blade-receiving aperture formed therein and a channel; and a collapsible, dielectric shield member extending outwardly from the housing and adapted to surround the blades when the safety device is attached to the plug and collapsible toward the housing when the plug is inserted into the wall socket

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and expandable to surround the blades when the plug is removed from the wall socket;

b) inserting the blades of the plug through the aperture in the housing;
and

5 c) attaching the housing and shield member on the plug.

19. The method as defined in claim 18, wherein the step of attaching the housing on the plug includes:

10 a) bonding a rear wall of the housing to a front face of the plug with an adhesive.

20. The method as defined in claim 18, wherein the step of attaching the housing on the plug includes:

15 a) providing opposing sides of the aperture with a flange; and
b) inserting the blades between the flanges which frictionally attaches the housing on the plug.

21. The method as defined in claim 18, further comprising the step of:

20 a) securing the shield member in the channel formed on a front face of the housing.

22. The method as defined in claim 18, further comprising the steps of:

- a) bonding a front surface of a pad to a rear surface of the housing; and
- b) bonding a back surface of the pad to a front surface of the plug.

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23. A safety device comprising:

a housing;

means adapted for attaching the housing to an electrical plug; and

an insulative structure attached to the housing and adapted for

surrounding the electrical blades of the plug, said insulative structure

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adapted to retract as the blades are inserted into an electrical outlet and to

extend to surround the blades as the blades are removed from the electrical

outlet.

24. The safety device as defined in claim 23, further comprising:

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a channel formed in a front surface of the housing, wherein the

insulative structure retracts into the channel when the electrical blades are

inserted into the electrical outlet.

25. The safety device as defined in claim 23, wherein the insulative

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structure comprises a bellows-like member having convoluted and

compressible walls.

26. The safety device as defined in claim 25, wherein the material of the insulative structure is selected from the group consisting of rubber, vinyl, polyvinyl chloride, polyurethane and mixtures, polymers, copolymers and derivatives thereof.

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